

PRINTERS & SCANNERS

FAQ

Q Why do blacks in my inkjet photos look grey and washed out?

A Although most inkjets have four cartridges – cyan, magenta, yellow and black – many use only three colours for photo printing. They make black tones by combining cyan, magenta and yellow to create what is known as composite black. This usually looks slightly grey when compared with prints made using black ink.

Composite black is used because most manufacturers fit dye-based colour cartridges and a pigment-based black. This type of black ink results in deep, laser-like characters on plain paper, but is unsuitable for photos.

If you want the best photo prints, look for a printer that uses dye-based black. For the best of both worlds, you could opt for a printer with both pigment and dye-based black, such as Canon's PIXMA iP4500 (see 'Also Consider...', opposite), which produces excellent photos and text documents.

Kat Orphanides

Printers and audio expert

kat@computershopper.co.uk

BROTHER HL-2170W

★★★★★

£152 inc VAT

From www.printerland.co.uk

Brother's HL-2170W is a mono laser printer with built-in 802.11g wireless networking, as well as the usual Ethernet and USB Hi-Speed ports. We were pleasantly surprised by how simple its wireless settings were to configure. A helpful install wizard prompted us to connect to the printer's own wireless SETUP network before entering the details of the network we wanted to connect it to. This is a marked improvement over wireless configurations that require you first to connect the printer to a PC via USB before configuring it. It also has a single-step auto-configuration option that is designed to work with some Buffalo and Linksys wireless routers.

The HL-2170W is compact and inoffensively styled, with a sturdy, functional design and minimal controls. It has just one button and three clearly marked LEDs that warn you when the drum or toner need replacing, as well as indicating more general errors such as a paper jam, an open front cover or lack of paper.

The paper tray can hold up to 250 sheets of A4, and the printer can handle weights of up to 163gsm. A useful sheet-feed slot enables you to print on individual envelopes or thicker media such as card.

The HL-2170W printed envelopes correctly, but not without slight crumpling at one edge. Paper fed from the tray was dealt with much more smoothly, with no feed problems and minimal curling.

Characters on our mono text document were sharp and solid, and printing 25 pages took just one minute, 16 seconds, which adds up to a quick 19.7ppm. A single page emerged in 13 seconds, which is rapid enough. Our mixed greyscale prints were clearly defined and



accurately shaded, but some areas were mottled where it appeared that toner had adhered to the page a little unevenly. Fortunately, this was visible only on close examination, as were slight lines of uneven grey in areas where one tone shaded into another.

The HL-2170W comes with a starter toner cartridge, which will print around 1,000 pages. Replacement cartridges are available in standard and high-yield versions. High-yield cartridges cost around £35 and print 2,600 pages at a cost of 1.34p per page. This is economical compared with many mono lasers, but it doesn't include the cost of replacing the £54 drum, which must be changed every 12,000 pages. This adds an additional 0.45p to the cost of each page after the first 12,000. Most home users are

unlikely to print enough for this to become an issue, although small offices should take note.

The HL-2170W produced good-quality prints throughout our tests, and print costs aren't extortionate even after factoring in the cost of replacing the drum. It's simple to use and easy to configure for wireless printing, making it an ideal choice if you need a shared printer but can't easily run a network cable to it.

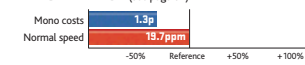
Kat Orphanides

SUMMARY

- ✓ Good print quality
- ✓ Simple wireless configuration
- ✗ Imperfect envelope printing

MONO LASER PRINTER 2,400x600dpi resolution, USB Hi-Speed, 10/100 Ethernet, and 802.11b/g wireless interfaces
PART CODE HL2170WZU1
DETAILS www.brother.co.uk

PERFORMANCE (see page 62)



Also consider...

SAMSUNG ML-2510

★★★★★

£55 inc VAT

From www.ebuyer.com



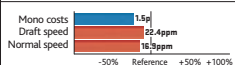
This grey laser printer may look a little drab, but

it's easy to set up and quick to install. Samsung's ML-2510 has a 250-sheet covered input tray and a single-sheet multipurpose feed slot, although it crumples envelopes.

It peaked at 22.7ppm when printing text, which is impressive for such an affordable printer. It's also cheap to run, with a cost per page of around 1.5p, yet it produces high-quality text and mono graphics. It's a great compact budget mono laser printer.



MONO LASER PRINTER 1,200x600dpi resolution, 24ppm maximum speed, parallel and USB Hi-Speed interfaces
PART CODE ML-2510
DETAILS www.samsung.co.uk
FULL REVIEW Oct 2006



CANON PIXMA MP520

★★★★★

£75 inc VAT

From www.oyyy.co.uk

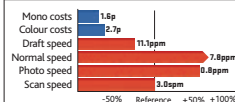


The PIXMA MP520

combines an affordable price with quick print speeds and low page costs. Even at draft quality, its text document prints looked great, while its normal-quality prints were laser-sharp. Draft prints were fairly slow, but normal-quality documents printed at 7.8ppm. Photo prints were good, too. The scanner interface doesn't list its top resolution of 1,200x2,400dpi, but you can set this manually. Scans at all resolutions were sharp and accurate.



COLOUR INKJET MFP 4,800x1,200dpi print resolution, 30ppm mono/20ppm colour maximum speed, 1,200x2,400dpi scan resolution, USB Hi-Speed, PictBridge USB interfaces
PART CODE 2178B008AA
DETAILS www.canon.co.uk
FULL REVIEW Jan 2008



BROTHER MFC-885CW

★★★★

£194 inc VAT

From www.printerbase.co.uk

Brother's MFC-885CW is relatively expensive for a colour-inkjet multifunction peripheral (MFP), but it has plenty of features to justify its price. It's a business-oriented MFP, so it's able to send and receive faxes. It also has an automatic document feeder (ADF) and – unusually – comes with a cordless DECT phone.

We were slightly disappointed by the absence of an automatic duplexer, but everything else you're likely to need in a business printer is present, along with a few features that you probably won't need, such as a memory card reader and a dedicated 6x4in photo-paper tray.

Unlike the similar-looking trays found in some of HP's Photosmart printers and MFPs, the photo-paper tray doesn't move into place automatically. Instead, when you select 6x4in photo paper from the driver's printing options, you're prompted to move the tray into position manually. You do this by pulling out the entire paper tray and moving the small format section inwards. While this isn't a particularly elegant approach, it's effective, and we were pleased to see that none of our photos suffered from the thin white border that we've seen previously on prints made by Brother inkjets.

Wireless networking is increasingly common in printers and MFPs, and

Brother has implemented this effectively in the MFC-885CW. The full range of printing and scanning functions is available over both wireless and wired network connections. This is impressive, as scanning has proved problematic for other wireless devices we've seen.

The helpful and detailed manual made installation simple. The printer's menus and 4.2in colour LCD screen made it easy to select our wireless network, and the WPA key can be entered using the numeric keypad for non-predictive text entry. The printer performed poorly on networks with a weak signal, resulting in print jobs that refused to start, or stopped halfway through. If your network's signal strength isn't strong enough, you could use the USB or Ethernet interfaces.

The scanner has a maximum optical resolution of 600x2,400dpi, and produced sharp, accurate images at high resolutions. Even at 300dpi, our mixed colour text and graphics document scans looked sharp at 100 per cent magnification; 150dpi scans were slightly fuzzy at full magnification.

The scanner interface doesn't have many options, but at least it stayed open and retained our settings between scans. It had trouble automatically detecting page

sizes, leaving us to position the capture area ourselves with the help of a handful of preset paper sizes. As a result, some of our scans suffered from slight white borders.

There were no major flaws in any of our correspondence-quality text, mixed colour or photo print tests. Draft prints were legible although rather pale, and photos were accurately coloured with minimal grain. Unfortunately, the MFC-885CW's good print quality comes at the expense of print speeds. Six 6x4in photos took almost half an hour to print, while mono text documents emerged at a leisurely 3.2ppm, and mixed colour prints were even slower at 1.7ppm. Photocopies weren't as slow as we expected, at 32 seconds for a mono copy, 44 seconds for colour and four minutes 20 seconds for 10 mono pages using the ADF. Copy quality was poor, though, with fuzzy text and little differentiation between dark shades in mono copies.

While there's nothing hugely wrong with the MFC-885CW, it failed to excel in any area. Print costs are reasonable at around 6p per page of mixed mono and colour if you use high-yield cartridges, while a mono page costs just 1.55p. Despite its extras, the frustratingly slow print speeds mean we can't recommend it.

Kat Orphanides

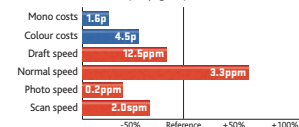


SUMMARY

- ✓ Good print quality
- ✓ Affordable print costs
- ✗ Slow print speeds

COLOUR-INKJET MFP 6,000x1,200dpi print resolution, 600x2,400dpi scan resolution, USB Hi-Speed, PictBridge USB, 10/100 Ethernet and 802.11b/g wireless interfaces
PART CODE MFC885CWU1
DETAILS www.brother.co.uk

PERFORMANCE (see page 62)



CANON PIXMA iP4500

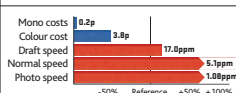
★★★★★

£64 inc VAT

From www.ebuyer.com

This worthy replacement to Canon's Best Buy-winning iP4300 is one of the best budget inkjets we've seen, beating pricier models for speed and quality. It takes five ink cartridges, including both dye and pigment-based blacks to create deep shadows in photos and pin-sharp text. Costs are exceptionally low, making the iP4500 cheaper to run than many laser printers. There's no screen or media card reader, but it does have two paper trays and an automatic duplexer, and can print on CDs.

INKJET PRINTER Five-colour inkjet, 9,600x2,400dpi maximum resolution, USB and PictBridge USB interfaces
PART CODE 2171B008AA
DETAILS www.canon.co.uk
FULL REVIEW Dec 2007



HP Color LaserJet 3600

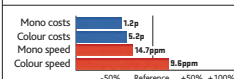
★★★★★

£295 inc VAT

From www.printerland.co.uk

This is a fast USB laser printer with excellent print quality. The only consumable is the toner cartridges, which incorporate the drum. These are economical if you buy high-yield versions, and the device comes with 6,000 mono and 4,000 colour pages' worth of toner. Print speeds were quick at 14.7ppm mono and 9.6ppm colour, and we were impressed by sharp mono text and accurate colour prints.

HOME/SMALL OFFICE COLOUR LASER 600x600dpi, 17ppm mono/17ppm colour, USB Hi-Speed interface
PART CODE Q5986A
DETAILS www.hp.co.uk
FULL REVIEW Feb 2008



TALLY GENICOM 8108N Colour Laser Printer

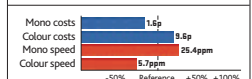
★★★★★

£112 inc VAT

From www.ebuyer.com

Tally Genicom's 8108N is the cheapest colour laser printer we've ever reviewed. Sharp mono text prints were produced at a phenomenal 25.4ppm. Colour prints were slower (at 5.7ppm) and cost an expensive 9.6p per page, but we were impressed by their quality. The 8108N has both network and USB ports, making it an ideal budget choice for a home or small office, despite its non-replaceable drum.

HOME/SMALL OFFICE COLOUR LASER 600x600dpi, 31ppm mono/8ppm colour, USB Hi-Speed 10/100 Ethernet interfaces
PART CODE 043792
DETAILS www.tallygenicom.co.uk
FULL REVIEW Feb 2008



HP LaserJet M1120 MFP

★★★★

£122 inc VAT

From www.lambda-tek.com/componentshop/

HP's LaserJet M1120 MFP is taller than a typical mono laser, thanks to the scanner positioned above its output tray. Fortunately it doesn't take up too much desk space. The printer arrives with the paper trays packed inside it, which have to be removed and slotted into place. Installing the toner cartridge involves raising the entire scanner unit. This version connects only through USB, while the more expensive LaserJet M1120n MFP has a 10/100 Ethernet port and costs around £30 more.

The mono LCD screen is just large enough to display two lines of very small text, and enables you to adjust the standalone copy settings using the printer's seven-button control panel. This is helpful as our first copy, at default settings, was dark, grainy and poorly defined. Several options are available, including brightness adjustment and preset copy modes for Text, Mixed and Picture. Our images were very grainy in all modes except Picture, which instead produced pale, fuzzy text.

Fortunately our test prints didn't suffer from the same problems. Print speeds for text documents were reasonably fast at 17ppm. Greyscale prints of our mixed text and graphics document appeared at 13ppm. Although print speeds were slower than we've seen in other devices at this price, we couldn't fault the quality. Text was dark and very clear, and images were accurately shaded. Some of our largest photo prints looked rather grainy, but the graphics in our mixed greyscale prints were consistently sharp.



Our scans looked great at the highest available resolutions, with accurate colours, clear reproduction and no unwanted visual artefacts. We noticed some grain at resolutions of 300dpi and below, although small font sizes were still clear at 100 per cent magnification.

The printer comes with a starter cartridge that lasts for 1,000 pages. Like most HP laser printers, the drum is built into the cartridge itself, so doesn't have to be replaced separately. This raises the price of replacement cartridges to £39 for 2,000 pages' worth of toner, which equates to a slightly expensive print cost of 1.95p per page. There's no high-yield cartridge available.

The ability to function as a fast, economical standalone photocopier is one of the best reasons to buy a mono laser MFP rather than a similarly priced colour inkjet MFP. Sadly, the M1120 MFP's poor copy quality is a big stumbling block.

It might have good print quality and decent scanning capabilities, but print speeds were unremarkable, as were running costs. For these reasons, it's impossible to recommend.

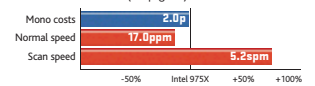
Kat Orphanides

SUMMARY

- ✓ Print quality
- ✓ Inexpensive
- ✗ Slow print speeds; poor copy quality

MONO LASER MFP 600x600dpi print resolution, 1,200x1,200dpi scan resolution, USB Hi-Speed interface
PART CODE CB537A
DETAILS www.hp.co.uk

PERFORMANCE (see page 62)



CHOOSING A... Multi Function Peripheral

Follow the steps to find your ideal specs

PRINT TECHNOLOGY: Inkjet
PRINT RESOLUTION: 4,800x1,200dpi
SCAN RESOLUTION: 600x2,400dpi
INTERFACES: USB
EXTRA:

Recommended minimum in grey

A multifunction peripheral combines a printer and scanner into a single compact unit, and also provides copying and fax facilities. This saves desk space and also money, compared with buying two or more separate devices.

1 Basic models cost as little as £40 including VAT, with specifications similar to those shown in grey above. These are OK if funds and space are tight, but quality and speed will be basic, and copying and faxing may not be possible without the help of the PC.

2 Spending more invariably gives you improved speed and image quality. These improvements aren't directly proportional to price, though, so read our reviews for details. Remember that running costs can outweigh the price of the unit.

3 Sheet-fed scanners handle multiple pages but flatbeds tend to give better image quality. Cheaper models make you choose one or the other, while pricier units combine both features.

4 If you'll be using the printer regularly, consider a laser rather than an inkjet model. These benefit from improved print speeds and lower running costs, and cost from around £120 including VAT. You'll need to spend a lot more for a colour laser-based machine.

5 To make the most of the standalone functions, you'll want decent front-panel controls. These can vary from a single copy button to something resembling a dedicated copier. If fax is important, you need to check that the device has a built-in modem.

6 Other useful extras to consider are memory card slots, duplexing units for the printer and/or scanner, additional paper trays and an Ethernet port to connect the device to a network.

Also consider...

EPSON Stylus Photo R360

★★★★★

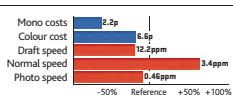
£81 inc VAT

From www.ebuyer.com

Despite unremarkable print speeds and higher-than-average running costs, the six-ink R360 is perfect if you're serious about home photo printing. It's a poor document printer, but our photos were almost flawless. Colour and shading were perfect, and we couldn't see any dithering or grain, even close up. Skin tones were true to life and all our images were rendered with clarity and distinction.



COLOUR INKJET PRINTER Six-colour inkjet, 5,760x1,440dpi maximum resolution, 30ppm mono/30ppm colour maximum speed, USB Hi-Speed and PictBridge interfaces
PART CODE C11C658021
DETAILS www.epson.co.uk
FULL REVIEW Mar 2008



LEXMARK Z1320

★★★★★

£33 inc VAT

From www.lambda-tek.com/componentshop

Lexmark's Z1320 is one of the smallest and most affordable single-function inkjets we've seen. Unlike most budget inkjets, it combines reasonable print costs and speeds with good-quality document and photo printing. We were impressed by its clear and readable draft documents. Our only complaint is that its output tray is a little bit flimsy.



FOUR-COLOUR INKJET 4,800x1,200 resolution, USB Hi-Speed interface
PART CODE 20A0402
DETAILS www.lexmark.co.uk
FULL REVIEW Dec 2007

